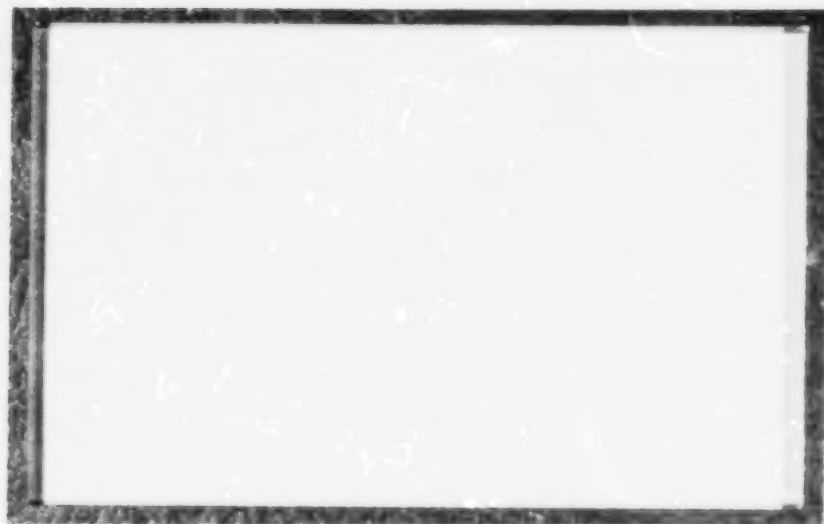


UNIVERSITÉ DE MONTRÉAL



CENTRE DE RECHERCHE SUR LES TRANSPORTS



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JET-SET
JEU ÉDUCATIF EN TRANSPORT
SIMULATION FOR EDUCATION IN TRANSPORTATION
PART 2
USER'S MANUAL FOR THE APPLE IIE VERSION

by
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1. INTRODUCTION

JET-SET (Jeu Éducatif en Transport - Simulation for Education in Transportation) is a computer game designed for the training of planners and managers in the field of interurban passenger transportation or for the training of students interested in this field. The game is played by a maximum of six players, each of whom is given a company to manage, and a game master (i.e. an instructor), who orchestrates proceedings and controls the economic and regulatory climate.

The object and philosophy of the game, as well as the rules to play, are described in detail in a companion paper, "JET-SET Part 1, Operation and rules of the game". Familiarity with it is essential to a thorough understanding of the principles of the game.

This user's manual for the APPLE IIE version is aimed at both the game master and the players. It describes the man/machine operations involved in playing a game by explaining how to use the disks and interact with the computer. In theory, the game master acts as the computer operator, but as will be seen, players can easily carry out some of the keyboard operations themselves.

The features of the simulated market environment in which the companies operate (cities, transportation network structure, technical characteristics of vehicles, economic situation and so on) are contained in the software; they contain all the information needed to start the simulation. To initialize a game, the game master must use the appropriate parts of the JET-SET software to prepare the game disk (there must be one game disk for each game); next, he has to print out the first reports for distribution to players. Each player may also print out the report concerning his own company himself. The game master also receives a report.

The first report given to each player describes the condition of his company and the environment in which it operates (the state of the market, the economic situation, etc.). Included in the report is a list of decisions to be made for the coming year (year 1 of the game, in other words). The game master's report contains quite a detailed summary of the general situation and also a list of decisions to be made. All of these reports refer to the situation at the end of what may be called year 0.

Each game consists of a series of rounds, each round corresponding to a year of all companies' operations and made up of three stages. In the first stage, the decisions made by the players and the game master are entered in the computer. This operation may be entirely done by the game master; however, each player may input his decision himself into the computer. This is done by means of an interactive program designed for maximum user-friendliness. In the second stage, the simulation program is run; only the game master may do this. This simulation determines the new status of the system by simulating the companies' operations and the travellers' behaviour. When the simulation is complete, it is assumed that one year has gone by and the companies find themselves in a new situation. This new situation corresponds to the state of the transportation network and of the socio-economic context one year later. In the third stage, players and the game master receive a printout of new reports so that they know what the new situation is. The reports are printed by means of the "report program". One game of JET-SET consists of a maximum of 20 rounds, representing 20 consecutive years.

Section 2 of this user's manual lists the APPLE hardware needed to play JET-SET. Section 3 describes the various stages of a game. Sections 4 to 6 describe the software or, to be more exact, the software available to the game master (section 4) and the players (section 5); the decision input program is presented in section 6.

Appendix A lists the problems likely to be encountered when using the computer and software and suggests solutions. Appendix B gives information on how to care for the disks.

In theory, the game master should read the whole of this user's manual, while players may restrict themselves to sections 5 and 6. If they choose to read all of it, they will note a degree of repetition in sections 4 and 5. This is intentional, our purpose being to provide separate instructions for the players and the game master.

2. HARDWARE FOR PLAYING JET-SET ON THE APPLE IIE

The current format of JET-SET assumes that the configuration of the computer on which it is run, an APPLE IIE, is as follows:

- 128K memory card in the auxiliary slot;
- monitor (black and white screen);
- two disk drives plus the disk drive control card inserted in slot 6; in this user's manual, "drive 1" means the drive on which the system starts up after being reset; "drive 2" is the other drive (these terms should be familiar to APPLE users);
- an EPSON MX-80 printer with GRAFTRAX connected to a GRAPPLER card inserted in slot 1 and in the correct setting (DIP switch 1 in the "off" position and all others "on"). Note that other types of printer can be used to print reports if the report program is modified.

There are six disks in all: three for the French version and three for the English one. They are identified as follows:

- 1E Input
- 1F Entrée des décisions
- 2E General tools and simulation
- 2F Utilitaires et simulation
- 3E Report
- 3F Rapports

One complete set of either French or English disks is all that is needed to play the game. The bilingual version of JET-SET (six disks) does, however, enable players to input decisions or generate reports in the language of their choice.

The program is spread over different disks so that there is one for each of the main stages in the game (the user selecting the appropriate disk for whatever he wants to do) and as a security measure, since only the game master should have access to disks 2E or 2F. From this point on in the manual, no distinction will be made between the English and French disks; they will simply be referred to by number.

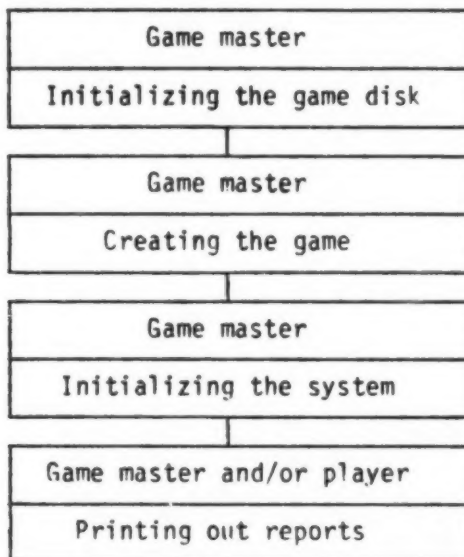
At least one blank disk is needed for each game to record changes in the status of the system, decisions etc. It would be a sensible precaution, however, to allocate two disks for each game so that a backup is available if one proves defective.

3. HOW JET-SET WORKS

A game of JET-SET consists of an initialization phase followed by a number of game rounds. This section of the manual is intended to familiarize players and the game master with the sequence of events in a game.

3.1 INITIALIZATION

The various stages for initialization of the game and who does what, are as follows:



3.1.1 INITIALIZING THE GAME DISK

A disk must be initialized before it can be used by the JET-SET software. This is done by the program provided with the general tools on disk 2. The operation is described in detail in section 4.1.1.

3.1.2 CREATING THE GAME

The game master must create a game using the decision input program. He is required to provide information such as the name of the game, players and companies. Further details will be found in section 4.1.2.

3.1.3 INITIALIZING THE SYSTEM (YEAR 0)

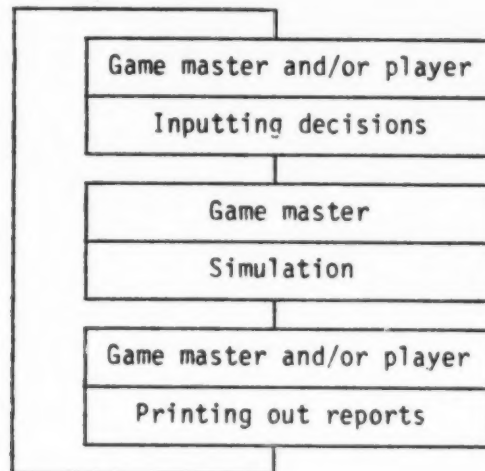
The game master must run the simulation program on the newly created game. This first run of the simulation program determines the initial state of the transport system and companies, i.e. their condition at the end of what might be called year 0. In other words, this first run determines the state of play for the first year. The operation is described in section 4.1.3.

3.1.4 PRINTING THE FIRST REPORTS (YEAR 0)

By using the report program, the game master can obtain a first report for himself and, if he wishes, for the players as well. Alternatively, the company reports may be generated by the players themselves. The procedure for the game master can be found in section 4.1.4, while players should refer to section 5.2.

3.2 GAME ROUND

After the initialization phase has been completed, everything is ready for the first round of the game to begin: the disk has been initialized, the system is at the start of the first year, and players and game master have the information they need for making decisions and filling out the questionnaire at the end of their reports. There are three stages in each round. The stages and who does what are as follows:



So that the game proceeds smoothly, the game master may set a deadline for players' decisions to be input and inform players when they can expect results.

3.2.1 INPUTTING DECISIONS

The game master may enter his and the players' decisions by means of the input procedure, as described in section 4.2.1. He may, however, leave the inputting to the players who should in that case follow the instructions in section 5.1. There is no specific order in which decisions are to be entered although it is preferable for the game master to be last, since he will then know what the players have decided. Decisions that have been entered may be amended as long as the simulation has not been started.

3.2.2 SIMULATION

Once all the decisions have been entered, the game master must run the simulation program, as described in section 4.2.2. The simulation has the effect of "altering" the data so that it reflects the game master's and players' decisions. At the end of the simulation, another year has gone by.

3.2.3 PRINTING OUT RESULTS

Once the simulation has been completed, the report program should be used to generate reports for the game master and players. The former should refer to section 4.2.3 and the latter to section 5.2 for the procedure to be followed. The game master has the option, if he wishes, to print out all reports.

3.3 BACKUP

As a precaution against defects which may occur at times, we recommend that the game master make a copy of the software and, after each simulation, of the disk used in the game. JET-SET has a backup program and the procedure to use it is described in section 4.3.

3.4 GOING BACK ONE YEAR

If a mistake has been made in inputting data or if the game master wishes to make a particular point clear, he may take the game back one year in time. This is possible since the information for the current year and the one before is stored on the game disk. By following the procedure set down in section 4.4, the game master can thus turn the system back to where it was prior to simulation, make changes, and then repeat the simulation.

4. GAME MASTER'S MANUAL

4.1 INITIALIZATION

4.1.1 INITIALIZING THE GAME DISK

- . Make sure that the state of the computer will permit disks to be changed.
- . Place disk 2 (General tools and simulation) in drive 1.
- . Ensure that the system on drive 1 has started up and is in control.
- . After the game has been identified on the screen, the following menu will be displayed:

JET-SET version n.yyymmdd

MENU

- 1 - Simulation
- 2 - Go back one year
- 3 - Recovery in case of break down
- 4 - Back up
- 5 - Disk initialization
- 6 - End of operations

Type the number of your choice:

- . Type number 5

The following message will appear on the screen:

Proceed as follows

- 1 - If any, remove the disk from drive 2
- 2 - Insert the disk to be initialized

Please note: All the information on this disk will be lost.

This is your last chance, do you really want to continue
(YES or NO)?

- . Place the disk to be initialized in drive 2 (use a blank disk or one containing information that is not needed)
- . Confirm your choice by answering the question:
YES will begin disk initialization
NO will recall the above menu
When the disk has been initialized, the main menu will return to the screen.

4.1.2 CREATING THE GAME

- . Make sure that the state of the computer will permit disks to be changed.
- . Place disk 1 (Input) in drive 1.
- . Place the initialized disk in drive 2.
- . Ensure that the system on drive 1 has started up and is in control.

- . After a few moments, the following question will appear on the screen:

*Input of decisions
JET-SET version n.yymmdd
Enter the name of the game ("RETURN" to finish):*

Type the name you have chosen for the game (8 characters maximum).

The following message and question will appear on the screen:

*This game is not on the diskette in drive 2.
Warning: You must be the master to create a new game.
Do you want to create game XXXX?*

- . If you type N (for NO), the previous question will reappear.
 - . If you type Y (for YES), the following information will be requested:
 - Game master name. (This is your password into the system; so if it is known to other people, you should use something else to identify yourself.)
 - Player names. (Since these are used when entering decisions and generating reports, they should all be different. If fewer than six people are playing, the game master should choose names for those who are absent.)
 - Company names.
- See section 6 for how to enter this information.
- . The program will take a few moments to initialize the game disk and then be in a state in which disks can be changed.

4.1.3 INITIALIZING THE SYSTEM (YEAR 0)

The simulation program with the initialized game disk, must be run by the game master.

- . Make sure that the state of the computer will permit disks to be changed.
- . Place disk 2 (General tools and simulation) in drive 1.
- . Place the game disk in drive 2.
- . Ensure that the system on drive 1 has started up and is in control.
- . After the game has been identified on the screen, the following menu will be displayed:

*JET-SET version n.yymmdd
MENU
1 - Simulation
2 - Go back one year
3 - Recovery in case of break down
4 - Back up
5 - Disk initialization
6 - End of operations*

Type the number of your choice:

- . Type number 1
After a few moments, the following message will appear on the screen:

Enter the name of the game ("RETURN" to finish)

- . Identify the game.
The program will check that the name you have given is the same as the one on the game disk. If it is, the following message will appear:

Enter your name ("RETURN" to go back to the main menu)

- . Type the name (or password) you have used when creating the game.
If the name is accepted by the computer, it will initiate the simulation. Allow 15 minutes or so for this operation. Messages will appear on the screen from time to time to indicate which point has been reached during the simulation. The main menu will reappear on screen when simulation is completed.

4.1.4 PRINTING OUT THE FIRST REPORTS (YEAR 0)

The game master should print out his own report and may also print those of the players for year 0.

- . Make sure that the state of the computer will permit disks to be changed.
- . Place disk 3 (Report) in drive 1.
- . Place the game disk in drive 2.
- . Ensure that the system on drive 1 has started up and is in control.
- . After the game has been identified, the following menu will be displayed:

JET-SET
version n.yymmdd
Welcome to the REPORTS section
Enter the name of the game ("RETURN" to finish):

- . The game master must enter the name of the game
- . If the name is the same as the one on the game disk in drive 2, the program will ask for identification:

Enter your name?:

- . Type the name (or password) you used when creating the game.
- . If the name is accepted by the computer, it will ask if the report is to appear on the screen or is to be printed.

*Do you want to have the report on screen (S)
or on printer (P)?*

- . Type S or P as you wish. Note that the report is designed for the printer (132 characters per line); if it is displayed on the screen (80 characters per line), the presentation will suffer slightly.

- . The following menu will then appear on the screen:

*Do you want to have
1 - the master's report?
2 - a company's report?
3 - the master's and all the companies' reports?
What is your choice?*

- . Type the number of your choice. (If you type number 2, you will then be asked which company.)

4.2 GAME ROUND

4.2.1 ACCESS TO DECISION INPUT PROGRAM

The game master may enter the players' decisions as well as his own.

- . Make sure that the state of the computer will permit disks to be changed.
- . Place disk 1 (Input) in drive 1.
- . Place the game disk in drive 2.
- . Ensure that the system on drive 1 has started up and is in control.
- . After the game has been identified on the screen, the following menu will appear:

*Input of decisions
JET-SET version n.gymdd
Enter the name of the game ("RETURN" to finish):*

The game master must identify the game by typing the name of the game which is on the game disk in drive 2. If the name is not the same, the following message and question will appear on the screen:

*This game is not on the disk in drive 2.
Warning: You must be the master to create a new game.
Do you want to create game XXXX?*

- . So as not to lose the current game, type N (for NO). The computer will then ask for the name of the game again.
- . When the name of the game is entered correctly, the following message will appear on the screen:

*Enter the name of the master or of a player ("RETURN"
to finish)*

- . Identify yourself or a player; if the system recognizes the name, it will go to the decision input stage, described in section 6.

When all decisions have been entered, the computer will come back to the following question:

*Enter the name of the master or of a player ("RETURN"
to finish)*

NOTE:

Decisions made for the coming year may be altered as long as the simulation program has not been run. After the player or game master has identified himself, the computer will check if decisions have already been entered. If they have, the following question will appear on the screen:

*You have already entered your decisions
Do you want to modify your decisions?*

If you type Y (for YES), you will be authorized to modify your decisions. If you type N (for NO), the computer will again ask the game master or the player to identify himself.

4.2.2 SIMULATION

Follow the instruction given in section 4.1.3.

4.2.3 PRINTING OUT REPORTS

Follow the instructions given in section 4.1.4.

4.3 BACKUP

- . Make sure that the state of the computer will permit disks to be changed.
- . Place disk 2 (General tools and simulation) in drive 1.
- . Place the game disk in drive 2.
- . Ensure that the system on drive 1 has started up and is in control.
- . After the game has been identified on the screen, the following menu will be displayed:

JET-SET version n.yymmdd

MENU

- 1 - Simulation
- 2 - Go back one year
- 3 - Recovery in case of break down
- 4 - Back up
- 5 - Disk initialization
- 6 - End of operations

Type the number of your choice:

- . Type number 4

After a few moments, the following message will appear on the screen:

For a back up, proceed as follows:

- Insert the source disk in drive 2.
- Insert the disk which will receive the copy in drive 1.
- Press "RETURN"

The backup disk must first be formatted; initialize it by following the instructions given in section 4.1.1.

- . Once the disk has been duplicated, the following message will appear on the screen:

*Put back the game disk, the simulation disk and press
"RETURN"*

- . Place the game disk in drive 2.
- . Place disk 2 (General tools and simulation) in drive 1.
- . Press "RETURN".
- . The main menu will return to the screen.

4.4 GOING BACK ONE YEAR

- . Make sure that the state of the computer will permit disks to be changed.
- . Place disk 2 (General tools and simulation) in drive 1.
- . Place the game disk in drive 2.
- . Ensure that the system on drive 1 has started up and is in control.
- . After the game has been identified on the screen, the following menu will be displayed:

JET-SET version n.yymdd

MENU

- 1 - Simulation*
- 2 - Go back one year*
- 3 - Recovery in case of break down*
- 4 - Back up*
- 5 - Disk initialization*
- 6 - End of operations*

Type the number of your choice:

- . Type number 2
- After a few moments, the following message will appear on the screen:

Enter the name of the game ("RETURN" to finish)

- . Type the name of the game stored on the disk in drive 2.
- The program will check that the name you have given is the same as the one on the game disk. If it is, the following message will appear:

Enter your name ("RETURN" to go back to the main menu)

- . Type the name (or password) you used when creating the game.
- If the name (or password) is accepted by the computer, it will go back one year. This will take a few moments, and then the main menu will return to the screen.

4.5 RECOVERY IN CASE OF BREAKDOWN DURING SIMULATION

- . Make sure that the state of the computer will permit disks to be changed.
- . Place disk 2 (General tools and simulation) in drive 1.
- . Place the game disk in drive 2.
- . Ensure that the system on drive 1 has started up and is in control.
- . After the game has been identified, the following menu will be displayed:

JET-SET version n.yymmdd

MENU

- 1 - Simulation*
- 2 - Go back one year*
- 3 - Recovery in case of break down*
- 4 - Back up*
- 5 - Disk initialization*
- 6 - End of operations*

Type the number of your choice:

- . Type number 3
After a few moments, the following message will appear on the screen:
Enter the name of the game ("RETURN" to finish)
- . Type the name of the game stored on the disk in drive 2.
The program will check that the name you have given is the same as the one on the game disk. If it is, the following message will appear:

Enter your name ("RETURN" to go back to the main menu)

- . Type the name (or password) you used when creating the game.
After a few moments, the following message will appear on the screen:

This option should be used only when a break down or an error has occurred during the simulation. If it is used in other circumstances the results will be unpredictable.

This is your last chance, do you really want to continue (YES of NO)?

If you answer YES, the simulation for the current year will be done again and the main menu will return to the screen afterwards.

4.6 ENDING THE UTILIZATION OF A DISK

When you select option 6 (End of operations) from the main menu on the simulation disk, or have finished inputting decisions or printing reports, the following message will appear on the screen:

BYE BYE!!

Inserer la disquette contenant le prochain logiciel a executer dans le lecteur de disques no 1 ou fermer l'ordinateur.

SVP pressez "RETURN" apres avoir insere l'autre disquette

Insert in drive 1 the disk with the next program to be run or turn off the computer.

Please press "RETURN" after inserting the disk.

You may then terminate operations and turn off the computer or change disks and continue with another part of the JET-SET software.

5. PLAYER'S MANUAL

The JET-SET software accessible to players enables them to enter decisions for the coming year or print out their company reports for the year which just ended. This section of the manual explains the procedure.

5.1 ACCESS TO DECISION INPUT PROGRAM

- . Make sure that the state of the computer will permit disks to be changed.
- . Place disk 1 (Input) in drive 1.
- . Place the game disk in drive 2.
- . Ensure that the system on drive 1 has started up and is in control.
- . After the game has been identified on the screen, the following menu will appear:

*Input of decisions
JET-SET version n.yymmdd
Enter the name of the game ("RETURN" to finish):*

You must then identify the name of the game. If you do so correctly (i.e. if the game exists), the computer will move on to the next stage. If you make a mistake, the computer will ask if you want to create this game. You MUST answer N (for NO) and the computer will again ask the name of the game. If you answer Y (for YES), the current game will be deleted and replaced by a new one.

- . After a few moments, the following message will appear on the screen:

*Enter the name of the master or of a player ("RETURN"
to finish)*

- . You must then identify yourself and press "RETURN". If the system recognizes the name and you have not yet entered your decisions for the current year, it will go to the decision input stage, described in section 6. If the decisions have been entered, the program will tell you so, and ask if you want to alter them by displaying the following message:

*You have already entered your decisions
Do you want to modify your decisions?*

If you answer is YES, the program will move to the decision input stage (see section 6). If the answer is NO, the message:

*Enter the name of the master or of a player ("RETURN"
to finish)*

will appear once again.

5.2 PRINTING OUT REPORTS

- . Make sure that the state of the computer will permit disks to be changed.
- . Place disk 3 (Report) in drive 1.
- . Place the game disk in drive 2.
- . Ensure that the system on drive 1 has started up and is in control.
- . After the game has been identified on the screen, the following menu will be displayed:

JET-SET
version n.yyymmdd
Welcome to the REPORTS section
Enter the name of the game ("RETURN" to finish):

You must enter the name of the game. If you make a mistake, the screen will go blank and then the same message will be displayed again.

If the name is the same as the one on the game disk in drive 2, the program will ask you to identify yourself.

Enter your name?

- . Type the name (or password) given to you when the game was created.
- . If the name is accepted by the computer, it will ask if the report is to appear on the screen or be printed.

*Do you want to have the report on screen (S)
or on printer (P)?*

- . Type S or P as you wish. Note that the report is designed for the printer (132 characters per line); if it is displayed on the screen (80 characters per line), the presentation will suffer slightly.

If you have identified yourself correctly and the simulation results are available, the report will be printed. If the computer has not recognized your name, it will again ask you to identify yourself. If the simulation results are not available, the following message will be displayed:

Sorry, the results are not available.

The original message will then return to the screen.

6. DECISION INPUT PROGRAM

There are two stages in entering decisions. In the first (see sections 4 and 5), the user identifies himself, the game, and the information he wishes to enter or amend. The second stage is the actual input of data. The presentation of the dialogue and the way in which it develops are fairly standard, regardless of the question being put by the computer. The user therefore only needs to be familiar with certain basic principles in order to proceed.

6.1 DESCRIPTION OF DISPLAY

The decisions or parameters to be entered have been grouped by family. Each group is of a size that enables all the questions in it to appear on the screen at once.

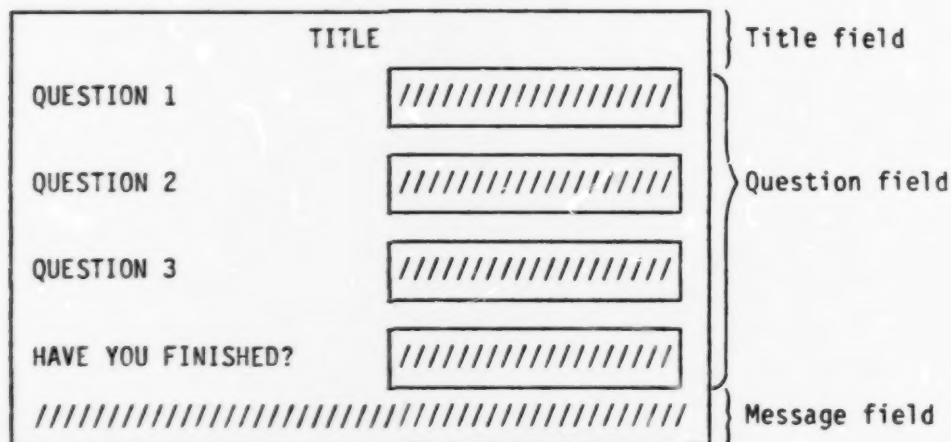


Figure 1: Display of question group

As the figure shows the screen is divided into three fields: one for the title, one for questions, and one for messages. The title field specifies the subject to which the questions refer. In the question field, there is a shadowed area ("reverse video" on the Apple IIE) for the answer. There may already be some text in that area; this a default value corresponding to the last value entered in answer to the question. The message field, separated from the rest of the screen by a line of apostrophes, gives the user some information regarding possible errors.

6.2 FILLING IN A QUESTION PAGE

The procedure for filling in a page of questions is explained in schematic terms in figure 2 and in more detail below. Do not be discouraged by the seeming complexity of the figure, for the input procedure is in fact extremely simple. It takes longer to describe than to do.

Initially, the cursor should be in the answer field for the first question. Each time a valid answer is given, the cursor will move to the next answer field. When the last question has been answered in the affirmative, the page is finished. If it is answered in the negative, the cursor will go back to the first question and you can go through the series of questions as often as you wish.

If a value already exists in one of the answer fields and is satisfactory, just press "RETURN" to make that value the current one and move on to the next question or finish the page.

If the answer field is blank or the value is not satisfactory, enter the value you do want and press "RETURN". If the value is acceptable, it will be re-displayed, framed in the left-hand corner of the answer field and the computer will move on to the next question. If for some reason the answer is not acceptable, an explanation of why it has been rejected will appear in the message field and you will be asked to press the space bar to continue (see section 6.3 for error messages and their meaning). By pressing the space bar, you will erase the message field and the incorrect value, and take the cursor back to the answer field of the question where the error occurred; any default value in the answer field will have been erased by the incorrect value and irretrievably lost.

Note that you cannot leave an answer field blank. You must answer ALL the questions.

If you answer YES when asked "Have you finished?", you will end the question page. It will then disappear from the screen and the message "One moment please" will be displayed until the computer is ready to move on to the next stage.

It was stated earlier that when you entered a value, it appeared on the screen framed in the left-hand corner of the answer field. In the vast majority of cases, the value will be displayed exactly as you typed it. There is, however, one exception to this rule: real values that cannot be represented in binary on the machine. If, for example, you enter 1.120, what you will see on the screen after pressing "RETURN" is 1.119. This is not a programming error, merely a problem connected with the machine and the binary mode of representation.

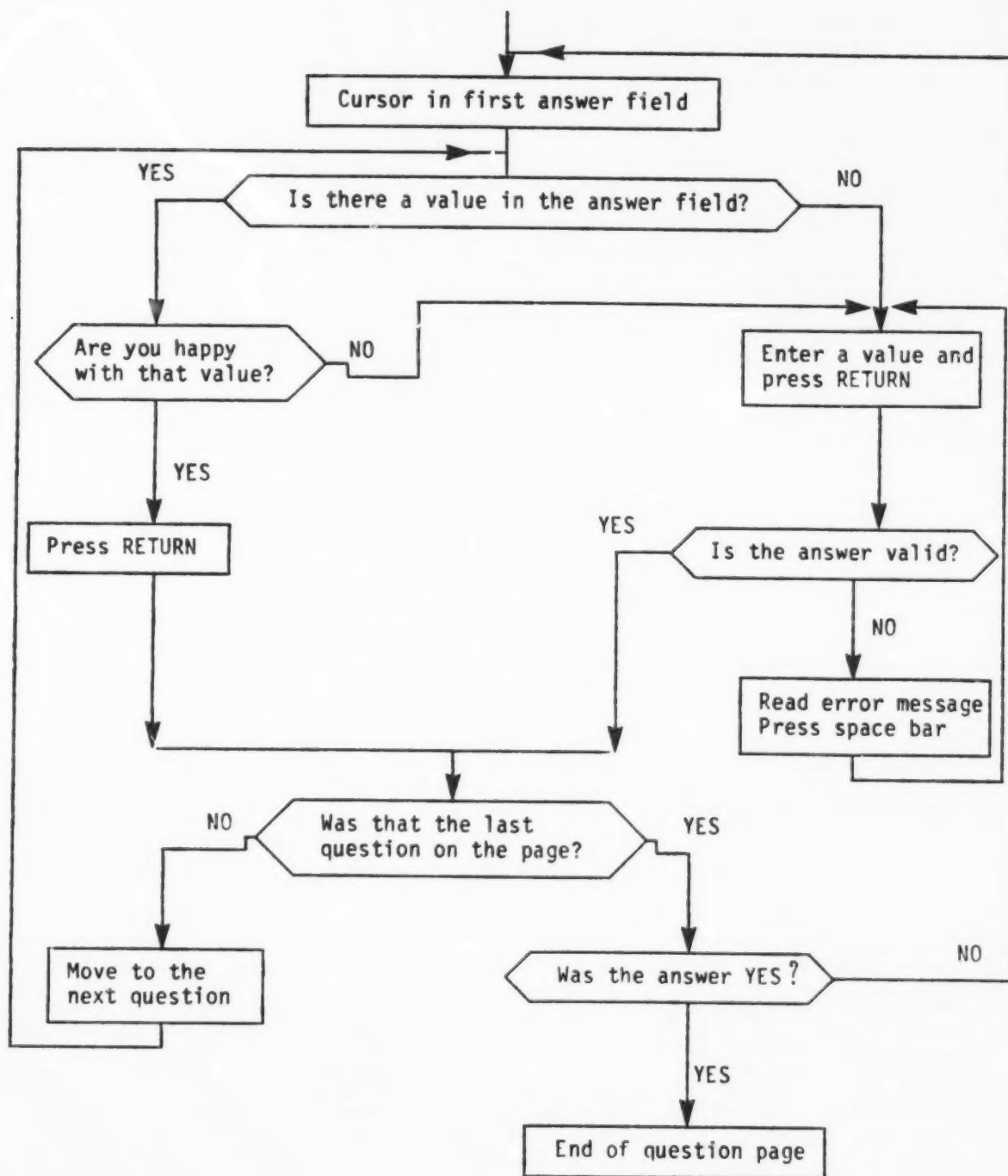


Figure 2: Procedure for filling in a question page

6.3 ERROR MESSAGES

When you answer a question, the system will check whether it is valid. If you have made a mistake of some kind, one of the following messages will appear on the screen.

- . Message: *You must enter an integer.*
Means: The system will not accept decimal points or decimal values. For example, 325 is a valid answer, but 325.0 is not.
- . Message: *You did not answer.*
Means: You cannot leave an answer field blank. You must answer ALL questions.
- . Message: *You must answer 'yes' or 'no'.*
Means: The question requires a "YES" or "NO" type answer. The following are accepted: "O", "Y", or "YES" for an affirmative, and "N" or "NO" for a negative.
- . Message: *Your answer is smaller than the lower bound.*
Means: The value you have typed in is less than the minimum allowed. You must correct the error by choosing a larger number.
- . Message: *Your answer is greater than the upper bound.*
Means: The value you have typed in exceeds the maximum allowed. You must correct the error by choosing a smaller number.
- . Message: *Only one letter.*
Means: The answer to the question must consist of one letter only.
- . Message: *Your answer has too many characters.*
Means: The string of characters is too long to be stored in the memory and should be shortened. Note that the number of characters accepted by the system varies with the question.
- . Message: *Illegal character in the answer.*
Means: The syntax of the integer or real number has not been respected.

Appendix A

Problems and solutions

Problem	Solution
A player or the game master has made a mistake in a decision and simulation has not begun	Decisions can be altered using the decision input program, if the simulation for the current year has not begun. The program will then tell the user that his decisions have already been entered and ask if he wants to make changes.
The game master or a player realizes after simulation that he has made a mistake in a decision.	Depending on the nature of the mistake, the game master may decide to go back one year in the game (see sections 3.4 and 4.4). The mistake can then be corrected and the simulation repeated.
Computer breakdown during simulation.	The game master should use the command for repeating the simulation (see section 4.5). He is advised to make frequent backup copies of games in progress, since he will then be able to continue the game even if the repeat simulation procedure proves unsuccessful. Note that this may occur if the breakdown has caused damage to the files.
Computer breakdown while decisions are being input or reports printed.	Merely repeat the operation when the computer is functioning again. This should not cause any problems unless the game disk has been affected by the breakdown.
Defective disk: (constant errors in read/write operations).	Use the backup disk held by the game master. If there is no backup, this means that the information on the defective disk is irretrievably lost and, depending on the disk, the game will either have to be started again or a new program disk ordered.

Appendix B

Care of disks

- . Make a backup copy of each disk
- . Return the disks to their envelopes after use
- . Do not touch exposed surfaces of disks
- . Never fold a disk
- . Always insert the disk in the drive carefully
- . Store disks at an ambient temperature of 10°C to 40°C
- . Keep disks away from magnetic objects.